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## CURRICULUM VITAE

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**ORGANIZATION:** Department of Commerce  
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**PRESENT POSITION:** Research Geneticist

**EDUCATION:** B.A., Occidental College, Los Angeles, 1998  
M.A., Occidental College, Los Angeles. 2000  
Ph.D., Scripps Institution of Oceanography, La Jolla, 2005

### EXPERIENCE:

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|----------------|--|
| 2015 - Present | Research Geneticist<br>DOC NOAA NMFS SWFSC<br>La Jolla, CA USA                                       |
| 2012 - 2015    | Visiting Scientist<br>J. Craig Venter Institute<br>La Jolla, CA USA                                  |
| 2012-2015      | Research Associate and Adjunct Professor<br>University of San Diego<br>San Diego, CA USA             |
| 2009-2012      | Associate Professor and Curator of Fishes<br>University of Puerto Rico, Mayagüez<br>Mayagüez, PR USA |
| 2005-2009      | Papahānaumokuākea MNM Postdoctoral Fellow<br>Hawaii Institute of Marine Biology<br>Kaneohe, HI USA   |

**RESEARCH INTERESTS:** Ichthyology, population genetics, life history of fishes, aquaculture, fish distributions, larval connectivity.

## HONORS AND AWARDS:

Ichthyological Society of Japan Best Article Award, 2008

“A molecular phylogeny of the groupers of the subfamily Epinephelinae (Serranidae) with a revised classification of the Epinephelini.” *Ich. Res.* 54(1)

## PUBLICATIONS:

1. Tucker, S.J., Kurniasih, E.M., **Craig, M.T.** 2016. A new species of grouper (*Epinephelus*; Epinephelidae) from the Indo-Pacific. **Copeia**. In Press.
2. Llorens-Mares, T., Liu, Zhengfend, Zeigler Allen, L., Rusch, D.B., **Craig, M.T.**, Dupont, C.L., Bryant, D.A., Casmayor, E.O. 2016. Speciation and ecological success by horizontal gene transfer in a green sulfur bacteria population: evidence for virus-mediated genes transmission. **In Review. ISME Journal.**
3. DiBattista, J.D., Whitney, J., **Craig, M.T.**, Hobbs, J.P., Rocha, L.A., Feldheim, K., Berumen, M.L., Bowen, B.W. 2016. Surgeons and suture zones: hybridization among four surgeonfish species in the Indo-Pacific. **PLoS One**. In Press.
4. Ma, K.Y., **Craig, M.T.**, Choat, J.H., van Herwerden, L. 2016. The historical biogeography of groupers: Clade diversifications patterns and processes. **Molecular Phylogenetics and Evolution** 100(2016):21-30.
5. **Craig, M.T.** 2016. Book Review: Review of the Splendid Perches, Callanthias (Percoidei: Callanthiidae). **Marine Biology Research** 12(2):210.
6. Selkoe, K., Gaggiotti, O., Treml, E., Wren, J., Donovan, M., Consortium, Hawaii Reef Connectivity Consortium, Toonen, R. 2015. The DNA of coral reef biodiversity: predicting and protecting genetic diversity of reef assemblages. **Proceedings of the Royal Society Series B** 283:20160354
7. Purcell, C., **Craig, M.T.**, Takeshita, N., Chabot, C. Hyde, J., Allen, L. 2015. Developing a genetic baseline for the yellowtail amberjack species complex, *Seriola lalandi* *sensu lato*, to assess and preserve variation in wild populations of these globally important aquaculture species. **Conservation Genetics**, 16(6):1475-1488.
8. Merten, W., Schizas, N., Craig, M., Appeldoorn, R. 2015. Genetic structure and dispersal capabilities of dolphinfish (*Coryphaena hippurus*) in the western central Atlantic. **Fishery Bulletin**, 113(4):419-429.

9. Martinez, N., Purcell, C., Chabot, C., **Craig, M.T.**, Paterson, C., Hyde, J., and Allen, L. 2015. A tale of three tails: Cryptic speciation in a globally distributed marine fish of the genus *Seriola*. *Copeia* 103(2):357-368.
10. DiBattista, J.D., Waldrop, E., Rocha, L.A., **Craig, M.T.**, Berumen, M.L., Bowen, B.W. 2015. Blinded by the bright: A lack of congruence between colour morphs, phylogeography, and taxonomy for a cosmopolitan Indo-Pacific butterflyfish, *Chaetodon Auriga*. **Journal of Biogeography**, 42(10):1919-1929.
11. **Craig, M.T.**, J.E. Randall, Bogorodsky, S., and Mal, A. 2015. *Lepadichthys bilineatus*, a new species of clingfish from Oman (Teleostei: Gobiesocidae), with a redescription of *Lepadichthys erythraeus* Briggs and Link from the Red Sea. **Zootaxa**, 3990(1):113-122.
12. Santoro, A. et al. 2014. Genomic and proteomic characterization of '*Candidatus Nitrosopelagicus brevis*': an ammonia-oxidizing archaeon from the open ocean. **PNAS**, 112 (4) 1173-1178.
13. Hastings, P., **Craig, M.**, Erisman, B., Hyde, J., Walker, H.J. 2014. Fishes of Marine Protected Areas Near La Jolla, California. **Bulletin of the Southern California Academy of Sciences** 113(3):200-231
14. Selkoe, K. Gaggiotti, G., Laboratory, ToBo, et al. 2014. Emergent Patterns of Population Genetic Structure for a Coral Reef Community. **Molecular Ecology**, 2014(23):3064-3079.
15. Szabo, Z., Snelgrove, B., **Craig, M.T.**, Rocha, L.A., Bowen, B.W. 2014. Phylogeography of the manybar goatfish, *Parupeneus multifasciatus*, reveals isolation of the Hawaiian Archipelago and a cryptic species in the Marquesas Islands. **Bulletin of Marine Science** 90(1):493-512.
16. Russell, B.C., **Craig, M.T.** 2013. *Anampsese viridis* Valenciennes 1840 (Pisces: Labridae) – a case of taxonomic confusion and mistaken extinction. **Zootaxa** 3722 (1): 083–091.
17. Bowen, B.W., Rocha, L., Bird, C., Karl, S.A., **Craig, M.T.**, DiBattista, J., Eble J.E., Gaither, M., Skillings, D., Toonen, R. 2013. The origins of tropical marine biodiversity. **TREE** 28(6):359-366.
18. Seyoum, S., Tringali, M., Barthel, B., Puchulutegui, C., Collins, A., **Craig, M.** 2013. Isolation and characterization of 29 polymorphic microsatellite markers for the endangered Atlantic goliath grouper (*Epinephelus itajara*), and the Pacific goliath grouper (*E. quinquefasciatus*). **Conservation Genetics Resources** 5(3). Online Publication.
19. Comeros-Raynal, M.T., Choat, JH, Polidoro, BA, Clements, KD, Abesamis, R, **Craig, MT**, Lazuardi, ME, McIlwain, J, Muljadi, A, Myers, RF, Nañola, CL, Jr., Pardede, S, Rocha, LA, Russell, B, Sanciangco, JC, Stockwell, B, Harwell, H, Carpenter, KE. 2012. The likelihood of extinction of iconic and dominant herbivores and detritivores of coral reefs: the parrotfishes and surgeonfishes. **PlosOne** 7(7):1-13.

20. DiBattista, J., Berumen, M., Gaither, M., Rocha, L., Eble, J., Choat, J., **Craig, M.**, Skillings, D., and Bowen, B. 2012. After continents divide: Comparative phylogeography of reef fishes from the Red Sea and Indian Ocean. **Journal of Biogeography**, 40(6):1170-1181.
21. DiBattista, J. D., Rocha, L. A., **Craig, M. T.**, Feldheim, K. A., Bowen, B. W. 2012. Phylogeography of Two Closely Related Indo-Pacific Butterflyfishes Reveals Divergent Evolutionary Histories and Discordant Results from mtDNA and Microsatellites. **Journal of Heredity**, 103(5):1-13
22. Sadovy de Mitcheson, **M. T. Craig**, et al. 2012. Fishing groupers towards extinction: a global analysis of threats and extinction risks in a billion dollar fishery. **Fish and Fisheries**. 14:119-136.
23. Sheppard, C., et al. 2012. Reefs and islands of the Chagos Archipelago, Indian Ocean: Why it is the world's largest no-take marine protected area. **Aquatic Conservation: Marine and Freshwater Ecosystems**, 22(2):232-261.
24. **Craig, M.T.**, Fodrie, F.J., Allen, L.G., Toonen, R.J., and Chartier, L.A. 2011. Discordant phylogeographic and biogeographic breaks in California Halibut. **Bulletin of the California Academy of Sciences** 110(3):141-151.
25. **Craig, M.T.** 2011. The ghost of crises past: A reply to Mooi and Gill. IN: Carvalho, M.R. De & Craig, M.T. (Eds) Morphological and Molecular Approaches to the Phylogeny of Fishes: Integration or Conflict? **Zootaxa**. 2946: 38-40.
26. J. DiBattista, C. Wilcox, **M. T. Craig**, L. A. Rocha and B. W. Bowen. 2011. Phylogeography of the Pacific Bluelined Surgeonfish, *Acanthurus nigrofasciatus*, reveals high connectivity and a cryptic endemic species in the Hawaiian Archipelago. **Journal of Marine Biology**, Invited Paper, Volume 2011 (2011), Article ID 839134.
27. Eble, J.E., L.A. Rocha, **M. T. Craig**, and B. W. Bowen. 2011. Not all larvae stay close to home: Insights into marine population connectivity with a focus on the Brown Surgeonfish. **Journal of Marine Biology**, Invited Paper, vol. 2011, Article ID 518516.
28. Gaither, M.R., Bowen, B. W., Bordenave, T.R., Rocha, L.A., Newman, S.J., Gomez, J.A., vanHerwerden, L., **Craig, M.T.** 2011. Phylogeography of the reef fish *Cephalopholis argus* (Epinephelidae) indicates a history of Pleistocene isolation between Indian and Pacific lineages with contemporary overlap in the Coral Triangle. **BMC Evolutionary Biology**, 11:189
29. Muths, D., Tessier, E., Gouws, G., **Craig, M.**, Mwale, M., Mwaluma, J., Mwandya, A., Bourjea, J. 2011. Restricted dispersal of the reef fish *Myripristis berndti* at the scale of the SW Indian Ocean. **MEPS**, 443:167-180.
30. Wiley, E. O., Chakrabarty, P., **Craig, M. T.**, Davis, M.P., Holcroft, N. I., Mayden, R. L., & Smith, Wm. L. 2011. Will the real phylogeneticists please stand up? IN: Carvalho, M.R. De

& Craig, M.T. (Eds) Morphological and Molecular Approaches to the Phylogeny of Fishes: Integration or Conflict? **Zootaxa**. 2946: 7-16.

31. Wiley, E. O., Chakrabarty, P., **Craig, M. T.**, Davis, M.P., Holcroft, N. I., Mayden, R. L., & Smith, Wm. L. 2011. A Response to Mooi, Williams and Gill. IN: Carvalho, M.R. De & Craig, M.T. (Eds) Morphological and Molecular Approaches to the Phylogeny of Fishes: Integration or Conflict? **Zootaxa**. 2946: 33-37.
32. **Craig, M.T.** 2010. Pattern versus process: broadening the view of marine invasive species. **Marine Biology**, Invited Review, 157:2127-2128.
33. **Craig, M. T.**, and B. E. Erisman. 2010. A competitive following association between two reef fishes and the Jewelled Moray in the Gulf of California, Mexico. **Coral Reefs**, 29(3):813.
34. **Craig, M. T.**, J. E. Eble, and B. W. Bowen. 2010. Origins, ages, and population histories: Comparative phylogeography of endemic Hawaiian butterflyfishes (genus *Chaetodon*). **Journal of Biogeography**, 37, 2125-2136.
35. Erisman, B. E., **M. T. Craig**, P. A. Hastings. 2010. Reproductive biology of the Panama Graysby, *Cephalopholis panamensis* (Teleostei; Epinephelidae) from the Gulf of California, Mexico. **Journal of Fish Biology**. 76:1312-1328.
36. Hoffmann, M. et al. 2010. The Impact of Conservation on the Status of the World's Vertebrates. **Science**, 330:1503-1509.
37. **Craig, M. T.** and J. E. Randall. 2009. *Briggsia hastingsi*, a new genus and species of clingfish from Oman. **Zootaxa**, 2271:64-68.
38. **Craig, M. T.**, R. T. Graham, , R. A. Torres, J. R. Hyde, M. O. Freitas, B. P. Ferreira, M. Hostim, L. C. Gerhardinger, A. B. Andrade, and D. R. Robertson. 2009. How many species of goliath grouper are there? Cryptic genetic divergence in a threatened marine fish and the resurrection of a geopolitical species. **Endangered Species Research**. 7:167-174.
39. Carvalho-Flho, Alfredo, C. E. L. Ferreira, and **M. T. Craig**. 2009. A shallow water population of *Pronotogrammus martinicensis* (Guichenot, 1868) (Teleostei; Serranidae; Anthiinae) from south-western Atlantic, Brazil. **Zootaxa**. 2228:29-42.
40. Erisman, B. E., **M. T. Craig**, and P. A. Hastings. 2009. A phylogenetic test of the size-advantage model: evolutionary changes in mating behavior influence the loss of sex change in a fish lineage. **American Naturalist**. 174(3):E83-E99.
41. Franklin, E. C., C. V. Brong, A. R. Dow, and **M. T. Craig**. 2009. Length-weight and length-length relationships of three endemic butterflyfish species (Chaetodontidae) from coral reefs of the Northwestern Hawaiian Islands, USA. **Journal of Applied Ichthyology**. 25(2009):616-617.

42. **Craig, M. T.** 2008. The goldrim surgeonfish (*Acanthurus nigricans*; Acanthuridae) from Diego Garcia, Chagos Archipelago: first record for the central Indian Ocean. **Zootaxa** 1850:65-68.
43. **Craig, M. T.**, J. E. Randall, M. Stein. 2008. The Fourspot Butterflyfish (*Chaetodon quadrimaculatus*) from the Philippines and the Solomon Islands, first records for the East Indies and Melanesia. **Aqua**, 14(3):159-164.
44. **Craig, M. T.** and J. E. Randall. 2008. Two new species of the Indo-Pacific clingfish genus *Discotrema* Briggs (Gobiesocidae). **Copeia** 2008(1):66-72.
45. **Craig, M. T.** 2007. Preliminary observations on the life history of the white-streaked grouper, *Epinephelus ongus* (Serranidae), from Okinawa, Japan. **Ichthyological Research** 54(1):81-84.
46. **Craig, M. T.** 2007. Facultative cleaning by the forcepsfish, *Forcipiger flavissimus* (Chaetodontidae). **Copeia** 2007(2):459-461.
47. **Craig, M. T.**, J. A. Eble, B. W. Bowen, and D. R. Robertson. 2007. High genetic connectivity across the Indian and Pacific oceans in the reef fish *Myripristis berndti* (Holocentridae). **Marine Ecology Progress Series** 334:245-254.
48. **Craig, M. T.** and P. A. Hastings. 2007. A molecular phylogeny of the groupers of the subfamily Epinephelinæ (Serranidae) with a revised classification of the Epinephelini. **Ichthyological Research** 54(1):1-17. (Best Article Award 2008 – Ichthyological Society of Japan).
49. Rocha, L. A., **M. T. Craig**, and B. W. Bowen. 2007. Phylogeography and the conservation of coral reefs. (Invited Review) **Coral Reefs** 26:501-512.
50. Smith, W.L., and **M. T. Craig**. 2007. Casting the percomorph net widely: The importance of broad taxonomic sampling in the search for the placement of serranid and percid fishes. **Copeia**. 2007(1):35-55.
51. **Craig, M. T.**, P. A. Hastings, D. J. Pondella, II, D. R. Robertson, and J. R. Casián. 2006. Phylogeography of the flag cabrilla, *Epinephelus labriformis*: implications for the biogeography of the tropical eastern Pacific and the early stages of speciation in a marine fish. **Journal of Biogeography** 33(6):969-979.
52. **Craig, M. T.**, and D. J. Pondella, II. 2006. A survey of the fishes of the Cabrillo National Monument, San Diego, California. **California Fish and Game**. 92(4):172-183.
53. **Craig, M.T.**, D.J. Pondella, II, and R.N. Lea. 2006. New records of the flag cabrilla, *Epinephelus labriformis* (Serranidae: Epinephelinæ), from the Pacific Coast of Baja

California, Mexico, and San Diego, California, USA, with notes on the distribution of other groupers in California. **California Fish and Game** 92(2):91-97.

54. **Craig, M. T.**, P. Wirtz, P. Bartsch, and P. Heemstra. 2006. Redescription and validation of *Alphestes afer* as an amphi-Atlantic grouper species (Perciformes: Serranidae). **Cybium**. 30(4):327-331.
55. Hafner, J. C., E. Reddington, and **M. T. Craig**. 2006. Kangaroo mice (*Microdipodops megacephalus*) of the Mono Basin: Phylogeography of a peripheral isolate. **J. Mammology**. 87(6):1204-1217.
56. Pondella, D. J., II, L. G. Allen, **M. T. Craig**, and B. Gintert. 2006. Evaluation of eelgrass mitigation and fishery enhancement structures in San Diego Bay, California. **Bulletin of Marine Science** 78(1):155-131.
57. Rocha, L. A., D. R. Robertson, C. R. Rocha, J.L. Van Tassell, **M. T. Craig**, and B.W. Bowen. 2005. Recent invasion of the tropical Atlantic by an Indo-pacific coral reef fish. **Molecular Ecology** 14:3921-3928.
58. **Craig, M. T.**, P. A. Hastings, and D. J. Pondella, II. 2004. Speciation in the Central American Seaway: The importance of taxon sampling in the identification of geminate species pairs. **Journal of Biogeography** 31:1085-1091
59. **Craig, M. T.**, P. A. Hastings, and D. J. Pondella, II. 2004. Notes on the systematics of the crestfish genus *Lophotus* (Lampridiformes; Lophotidae), with a new record from California. **Southern California Academy of Sciences Bulletin**. 103(2):57-65.
60. **Craig, M. T.**, F. J. Fodrie, and P. A. Hastings. 2004. The nearshore fish assemblage of the Scripps Coastal Reserve. **Coastal Management** 32:341-351.
61. Pondella, D.J., II, **M.T. Craig** and Jens Franck. 2003. The phylogeny of *Paralabrax* (Perciformes: Serranidae) and allied taxa inferred from 16S and 12S mitochondrial sequence data. **Molecular Phylogenetics and Evolution**, 29(1):176-184.
62. Pondella, D. J., II, J. S. Stephens, Jr. and **M. T. Craig**. 2002. Fish production of a temperate artificial reef based upon the density of embiotocids (Teleostei: Perciformes). Proceedings of the Seventh International Conference on Artificial Reefs and Related Aquatic Habitats. **ICES Journal of Marine Science** 59:S88-S93.
63. **Craig, M. T.**, D. J. Pondella, II, J. P. C. Franck, and J. C. Hafner. 2001. On the status of the serranid fish genus *Epinephelus*: Evidence for paraphyly based on 16s DNA sequences. **Molecular Phylogenetics and Evolution** 19(1):121-130.
64. Pondella, D. J. II, and **M. T. Craig**. 2001. First record of the sabertooth blenny *Plagiotremus azaleus*, in California with notes on its distribution along the Pacific coast of Baja California. **Southern California Academy of Sciences Bulletin**. 100(3):144-148.

65. **Craig, M. T.**, D. J. Pondella, II, and J. C. Hafner, 1999. Analysis of Age and Growth in two Eastern Pacific Groupers (Serranidae: Epinephelinae). **Bulletin of Marine Science** 65(3):807-814.
66. Pondella, D. J, II, R. Snodgrass, **M. T. Craig**, and H. S. Kim. 1998. Re-Occurrence of the three-band butterflyfish, *Chaetodon humeralis*, in the Santa Monica Bay, with notes on its distribution and abundance. **Southern California Academy of Sciences Bulletin** 97(3):121-124.

#### **OTHERS (BOOKS AND BOOK CHAPTERS):**

1. Nieto, A., et al., 2015. European Red List of Marine Fishes. Luxembourg: Publications of the European Union. ISBN: 978-92-79-45412-7. DOI: 10.2779/082723
2. **Craig, M.T.**, Y. J. Sadovy, and P. C. Heemstra. 2011. Groupers of the World: A Field and Market Guide. NISC, South Africa.
3. Carvalho, M.R. De & **Craig, M.T.** (Eds) 2011. Morphological and Molecular Approaches to the Phylogeny of Fishes: Integration or Conflict? Zootaxa, 2946: 1-142.
4. Sheppard, C., Bowen, B., Chen, A., **Craig, M.** et al. 2012. British Indian Ocean Territory (the Chagos Archipelago): Setting, Connections and the Marine Protected Area. Chapter 17 IN: Coral Reefs of the World: *Coral Reefs of the UK Overseas Territories*. Coral Reefs of the World, Volume 4:223-240. Springer Dordrecht Heidelberg New York London.